

## WEST Search History

DATE: Saturday, August 24, 2002

**Set Name Query**

side by side

**Hit Count Set Name**

result set

*DB=USPT; PLUR=YES; OP=ADJ*

L11	L10 not l5	6	L11
L10	l3 and l6	6	L10
L9	6041354[pn]	1	L9
L8	5572645[pn]	1	L8
L7	5805804[pn]	1	L7
L6	(709/220 OR 709/221 OR 709/222).CCLS.	920	L6
L5	l3 and l4	11	L5
L4	(709/230 OR 709/231).CCLS.	793	L4
L3	l1 same l2	97	L3
L2	(transmi\$ or send\$ or sent or transfer\$) near2 (packet\$ or stream\$)	31750	L2
L1	(adapt\$ or scal\$ or qos or (quality near service)) same server\$ same client\$	1956	L1

END OF SEARCH HISTORY

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END OF SEARCH HISTORY

**WEST**☐ **Generate Collection** **Print**

L5: Entry 6 of 11

File: USPT

Jul 4, 2000

DOCUMENT-IDENTIFIER: US 6085252 A

TITLE: Device, system and method for real-time multimedia streaming

Detailed Description Text (41):

FIG. 5, numeral 500, is a block diagram of one embodiment of a one-way realtime multimedia streaming system in accordance with the present invention. The system includes a multimedia server (502), a packet network (504), and a multimedia client (506). The client (506) is the same as that shown in FIG. 3, i.e., includes a packet buffer (302), a packet processor (304), a QoS manager (306) and a robust multimedia player (308), and operates in the manner described above. The server (502) consists of: a rate scaler (508), a packetizer (510), a packet buffer (512), a packet transmitter (514), and a feedback message processor (516). The feedback message processor (516) is operably coupled to receive feedback messages sent by the client (506) and is utilized to decode the received messages. If the received message is a retransmission request message, then the identity of the requested packet and the number of copies for retransmission are passed to the packet transmitter (514), which will fetch the requested packet from the packet buffer (512) and transmits the requested number of copies of the packet to the network. If the received message is a rate control message, then the received message is forwarded to the rate scaler (508).

Detailed Description Text (45):

FIG. 7, numeral 700, is a block diagram of another embodiment of a one-way realtime multimedia streaming system in accordance with the present invention. The system shown in FIG. 7 is different from that shown in FIG. 5 in that the QoS optimizer (720) is moved from the client in FIG. 5 to the server in FIG. 7. The QoS optimizer (720) is coupled to the rate scaler (712), the feedback message processor (722), and to receive G (the bandwidth budget at the server). The packet transmitter (718) is coupled to the QoS optimizer (720) and the packet buffer (716) and is used to transmit packets along the packet network (704). The packetizer (714) is coupled to the rate scaler (712). The robust multimedia player (744) includes a multimedia player (730), a bitstream buffer (728), an error concealment circuit (738), and a delay circuit (740) that are coupled in the same manner and operate in the same manner as the elements of the robust multimedia player (308) of FIG. 3. The packet buffer (724) and the packet processor (726) operate in the same fashion as those in FIG. 5.

Detailed Description Text (53):

FIG. 11, numeral 1100, is a flow chart of one embodiment of steps for a method for, in a client device, receiving and in real-time playing out, by a client device, a multimedia file stored in a remote server in accordance with the present invention, wherein the client device and server are connected to a packet network, and the client device includes a packet buffer, a packet processor, and a quality of service QoS manager. The method includes the steps of: A) storing (1102) incoming packets sent by the remote server in the packet buffer; B) detecting (1104), using the packet processor, lost packets, and C) sending (1106), utilizing the QoS manager, retransmission requests to the remote server, wherein said retransmission requests are sent upon detection of a lost packet and request the retransmission of multiple copies of the lost packet, and wherein a number of multiple copies requested is in accordance with an importance of the lost packet.

Current US Original Classification (1):

WEST

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L5: Entry 8 of 11

File: USPT

Sep 14, 1999

DOCUMENT-IDENTIFIER: US 5953506 A

TITLE: Method and apparatus that provides a scalable media delivery system

Detailed Description Text (52):

The previous explanation has illustrated how to form the base and additive adaptive streams according to the present invention. Explanation now having been provided for how to create and store adaptive streams on a server, explanation will now be provided for the method for determining which of the adaptive streams to send to a particular client computer from a server, so that this information can then be displayed on a display device associated with the client computer. In that regard, FIG. 12 is referred to and illustrates a stream server 400 and client computers 500.sub.1, 500.sub.2, 500.sub.3 . . . 500.sub.n. It should be noted that the present invention is currently implemented at the server and the client through a sequence of computer instructions corresponding to the program description that follows, but, can also be embodied as a purely hardware device, or a combination of hardware and software components, that can be used to create each of the base and additive adaptive streams .SIGMA.0-.SIGMA.7 according to the present invention. FIG. 13 illustrates communication between a single stream server 400 and a single client computer 500. In the initial sequence of operations, in an initial step 1, a user will make a request for a browser to use the adaptive stream server. The browser will cause, in a step 2, a request to the adaptive stream client-based program and generate a series of commands necessary to begin implementation of the adaptive stream program. Required information, explained in more detail hereinafter is delivered from the adaptive stream client program to the browser in a step 3, which information will, in a step 4, be transmitted to an http server associated with the adaptive stream server. This information will be transmitted to the adaptive stream server in a step 5. In response, the adaptive stream server, in a step 6, will notify the http server that the adaptive stream server will be able to communicate directly with the adaptive stream client using the protocols that are defined within this application. Thereafter, communication will take place directly between the adaptive stream server and the adaptive stream client computer as illustrated in FIG. 14. Alternatively, other communication paths can be established, such as an adaptive stream client communicating directly with an adaptive stream server.

Detailed Description Text (53):

So that the operation of the present invention is most easily understood, reference will first be made to the operation that allows for the client computer to determine the characteristics of the client system that are then used to generate a profile associated with the client computer. Specifically, this profile, in combination with an actual available network bandwidth, will be dynamically updated at periodic intervals, typically being a minute or less and preferably less than every 10 seconds, so that the most appropriate combination of adaptive streams, at the most appropriate frame rate, are transmitted by the stream server to the client computer.

Detailed Description Text (57):

Thereafter, in step 604 a connection is established between the adaptive stream server 400 and the particular client computer 500. Thereafter, the profile is sent in a step 606 and, after the user makes a selection of the particular sequence that he desires to see/hear in step 608, step 610 follows and adaptive streams are transmitted in accordance with the user profile thereafter. If the user desires to terminate the session, the session can be terminated as indicated by step 612 in